REMARKS

Abstract

In the Office Action, the Examiner objected to the Abstract because it contained two paragraphs. In accordance with the Examiner's suggestion, the Abstract has been amended to combine the two paragraphs into one. In accordance with the rules, a copy of the Abstract is included on a separate sheet enclosed herewith.

Claim Rejections- §103

In the Office Action, the Examiner rejected claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,366,766 to Sekiguchi et al. or United States Patent No. 6,337,102 to Forrest et al.

Claim 1 as amended and newly added claim 7 each require that the host organic layer and the dopant organic layer are formed separately. As described on pages 15-16 of the specification:

> If each of the organic thin films 102a to 102e is composed of organic material as a host and another organic material as dopant, the foregoing method permits the host layer and the dopant layer to be formed continuously. The resulting organic thin film is constructed such that the dopant is added to host material as in the case of delta doping.
>
> The host and dopant layers which are sequentially formed are homogeneous in quality because the previously formed lower layer is not thermally affected by the upper layer formed later, as mentioned above. Therefore, it is possible to accurately control the dopant concentration by properly controlling the thickness of the host and dopant layers on the substrate. Thus, the organic thin film layers 102a to 102e can be formed under accurate control.

> The fact that the dopant concentration can be accurately controlled by adjusting the thickness of the host and dopant layers permit the organic thin film layers 102a to 102e (or the organic EL element) to be designed to more freely.
>
> For example, the emitting layer 102c may have a structure as shown in Fig. 3. Host layers A of the prescribed thickness are formed in so that they are in contact with the upper and lower layers, and dopant layers B are formed between the host layers A. In this lay it is possible to form an organic thin film layer in which a dopant is added only to the center of the host. The resulting organic thin film is exempt from concentration quenching that occurs when the dopant is excessively close to the interface.

Neither Sekiguchi nor Forrest describes formation of an electroluminescence device which provides for separate formation and deposit of host and dopant organic layers. Column 4, lines 50-55 of Forrest provides:

> the method of the present invention is used to deposit a wide variety of organic thin films from the reaction of vapor precursors. As used herein, "reaction" refers to a chemical reaction in which precursor reactants form a distinct reaction product, or alternatively, it merely refers to a combination or mixture of precursor materials, or where precursor materials and form a donor-acceptor or quest-host relationship.

The abstract of Forrest provides that the method disclosed comprises "the steps of providing a plurality of organic precursors in the vapor phase, and reacting the plurality of organic precursors . . ." Thus, the disclosure provided by Forrest is similar to the disclosure of the organic vapor deposition method (OVPD) described on pages 2-3 in the background portion of Applicants' specification.

Newly Added Claims

Claims 5-12 have been added in this amendment. Claims 5 and 6 depend from claim 1.

Applicant asserts that because claim 1 is allowable, claims 5 and 6 are also allowable. Claim 7 is allowable for the reasons stated above. Claims 8-10 depend from claim 7. Applicant asserts that because claim 7 is allowable, claims 8-10 are also allowable.

Each of claims 11 and 12 are directed to a method of forming an electroluminescence device wherein distinct host and dopant layers are formed. Because the references cited do not disclose the formation of distinct host and dopant layers in connection with the formation of an electroluminescence device, Applicant asserts that claims 11 and 12 are allowable.

Double Patenting

In the Office Action, the Examiner rejected claims 1-4 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over certain claims of United States Patent No. 5,993,542. Applicant submits that the claims submitted and the claims of United States Patent No. 5,993,542 are patentably distinct. The claims of the instant invention are directed toward a method of manufacturing an organic electroluminescence device whereas the claims of United States Patent No. 5,993,542 are directed toward a method of growing nitride semiconductor layers. Neither the claims of the cited reference nor the disclosure provide any teaching or suggestion regarding the subject matter of the present invention. Therefore it is respectfully requested that the Examiner's rejection on the basis of double patenting be withdrawn.

Applicant, by the amendments and remarks presented above, has made a concerted effort to present claims which clearly define over the prior art of record, and thus to place this case in condition for allowance.

Should the present claims not be deemed adequate to effectively define the patentable subject matter, the Examiner is respectfully urged to call the undersigned attorney of record to discuss the claims in an effort to reach an agreement toward allowance of the present application.

Respectfully submitted,

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By: _____

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